

detecting means becomes less than a predetermined value, the controlling means makes a driving force of the electric motor larger than that when the atmospheric pressure is not less than the predetermined value.

5 [0006] Preferably, the control apparatus further comprises intake air mass detecting means for detecting an intake air mass, and the controlling means determines an increase of the driving force of the electric motor, based on a deviation between the intake air mass detected by the intake air mass detecting means and a target intake air
10 mass determined based on an operating state of the internal combustion engine.

[0007] In another aspect, preferably, the control apparatus further comprises a turbocharger for implementing supercharging by making use of an exhaust flow of the internal combustion engine, and a variable
15 nozzle mechanism for variably controlling a supercharging state by the turbocharger, and when the atmospheric pressure detected by the pressure detecting means becomes less than the predetermined value, consideration to the intake air mass is prohibited on the occasion of determining a control quantity of the variable nozzle mechanism.

20 [0008] Furthermore, preferably, the electric motor is built in the turbocharger, and the supercharger and the turbocharger are integrated with each other.

Preferably, the control apparatus for the electrically assisted supercharger according to the present invention comprises an exhaust
25 gas recirculation system for recirculating exhaust gas discharged from the internal combustion engine, to the intake passage, and the

controlling means controls the exhaust gas recirculation system so that an amount of the exhaust gas recirculated to the intake passage becomes coincident with a target exhaust gas recirculation amount determined based on the operating state of the internal combustion engine.

5 Preferably, the controlling means controls the electric motor so that the intake air mass becomes coincident with a target intake air mass.

10 Preferably, the controlling means controls the electric motor so as to secure a target intake air mass, with further consideration to an output to be compensated for because of the prohibition of consideration to the intake air mass on the occasion of determining the control quantity of the variable nozzle mechanism.

15 Furthermore, preferably, the controlling means prohibits consideration to the intake air mass on the occasion of determining the control quantity of the variable nozzle mechanism and controls the electric motor so that the intake air mass becomes coincident with a target intake air mass.

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wherein when the atmospheric pressure detected by the pressure detecting means becomes less than the predetermined value, consideration to an intake air mass is prohibited on the occasion of determining a control quantity of the variable nozzle mechanism.

5 4. The control apparatus for the electrically assisted supercharger according to Claim 3, wherein the electric motor is built in the turbocharger and wherein the supercharger and the turbocharger are integrated with each other.

10 5. (New) The control apparatus for the electrically assisted supercharger according to Claim 2, comprising an exhaust gas recirculation system for recirculating exhaust gas discharged from the internal combustion engine, to the intake passage,

15 wherein the controlling means controls the exhaust gas recirculation system so that an amount of the exhaust gas recirculated to the intake passage becomes coincident with a target exhaust gas recirculation amount determined based on the operating state of the internal combustion engine.

20 6. (New) The control apparatus for the electrically assisted supercharger according to Claim 2, wherein the controlling means controls the electric motor so that the intake air mass becomes coincident with the target intake air mass.

25 7. (New) The control apparatus for the electrically assisted supercharger according to Claim 3, wherein the controlling means controls the electric motor so as to secure the target intake air mass, with further consideration to an output to be compensated for because of the prohibition of consideration to the intake air mass on the occasion of

determining the control quantity of the variable nozzle mechanism.

5 8. (New) The control apparatus for the electrically assisted supercharger according to Claim 3, wherein the controlling means prohibits consideration to the intake air mass on the occasion of determining the control quantity of the variable nozzle mechanism and controls the electric motor so that the intake air mass becomes coincident with the target intake air mass.